

# mod\_signalwire

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## 0. About

Allows external service connections to SignalWire telecommunications provider via *integrations*, formerly known as *connectors*. See the [official connector product description](#) for more info.



Enabled by default in `modules.conf.xml` for vanilla installations.

Supported services:

- SignalWire STACK
- FreeSWITCH
- Agora
- Zapier

## 1. Capabilities

Enables several valuable functions that will automate configuration and connect services. Without any additional configuration in the FreeSWITCH instance, FreeSWITCH can be connected to SignalWire CLOUD. When doing so the FreeSWITCH configuration will be automatically modified based on what CLOUD services are assembled under the Integration.

- **Voice**  
Voice resources including DIDs, Toll Free numbers can be purchased through CLOUD and directed to your FreeSWITCH Integration, which will automatically configure your FreeSWITCH instance to work with the Voice resources.
- **Messaging**  
Not yet available.

## 2. Components

### 2.1 mod\_signalwire

This official SignalWire module is part of FreeSWITCH v1.8.3 and later (check [Release Notes](#)) and STACK v 20.18.2 which can be obtained from SignalWire STACK repositories. Contact SignalWire Sales ([sales@signalwire.com](mailto:sales@signalwire.com)) for more information. `mod_signalwire` installs as part of the default package and windows installs, and will be loaded by default on new installs. See below for installation / loading instructions on existing installations.

### 2.2 SignalWire CLOUD Resources

The CLOUD APIs and dashboard can be used together to enable a FreeSWITCH Integration for voice. The intuitive dashboard will allow users to create the Integration that is associated with your FreeSWITCH instance. APIs take it to another level and allow for quite a bit of flexibility.

## 2.3 CLOUD APIS

SignalWire Cloud APIs are defined here: <https://docs.signalwire.com/>

RELAY APIs can be found here: <https://docs.signalwire.com/relay-rest/>

## 2.4 CLOUD Integration UI/UX

Go to **Integrations** in your SignalWire Dashboard.

## 3. Connect to SignalWire by creating a new Integration/Connector



**Only from FreeSWITCH 1.8.3**

You will need to be running at least FreeSWITCH 1.8.3, or STACK 20.18.2 in order to load the SignalWire module.

### Summary of the steps below

Step 0. Load `mod_signalwire`.

Step 1. Get a connection token.

Step 2. Connect your instance to SignalWire (using the Dashboard).

Step 3. OUTBOUND CALLS: set up a purchased phone number to be used with your integration/connector.

Step 4. INCOMING CALLS: associate a connector with a purchased number to handle incoming calls.



If **Step 4.** is omitted, any calls to the purchased number(s) will disconnect with busy signal.

### Step 0. Load `mod_signalwire`



**Is it already loaded?**

`mod_signalwire` is enabled by default on new installations, but to check:

```
fs_cli
```

```
freeswitch@vm> module_exists mod_signalwire  
true
```

1. Add (or uncomment) the line to your `modules.conf.xml` configuration file:

```
modules.conf.xml
```

```
<load module="mod_signalwire"/>
```

2. Use `load mod_signalwire` on `fs_cli`

```
fs_cli
```

```
freeswitch@vm> load mod_signalwire
```

### Step 1. Get a connection token

Issue the command `signalwire token` on `fs_cli` or, if the module had to be loaded, it is automatically generated by `load mod_signalwire`.



2. Fill out the form by adding a name and pasting the **connection token** from Step 1.

The screenshot shows the SignalWire dashboard with a sidebar on the left containing navigation options like 'Access News', 'PROJECT', 'Dashboard', 'Phone Numbers', 'Relay', 'SIP', 'LaML', 'Dialogflow', 'Integrations', 'API', 'Usage', 'SPACE', 'Users', 'Billing', and 'Settings'. The main content area is titled 'New FreeSwitch Connection'. It includes a sub-header 'Connect FreeSWITCH' and a paragraph explaining that users can connect FreeSWITCH to SignalWire using the 'mod\_signalwire' module. Below this, it specifies the 'Minimum Version: 1.8.3' and 'Module Info: mod\_signalwire'. An 'Installation' section provides instructions on how to find the 'SignalWire Connection Token'. The form contains two input fields: '\* NAME' with the placeholder text 'Give this connection a friendly name to more easily find and search for it later.' and '\* CONNECTION TOKEN' with the placeholder text 'Follow the instructions above to find your connection token and enter it here.'. A blue 'Connect' button is located at the bottom of the form.

### Step 3. OUTBOUND CALLS: set up a purchased phone number to be used with your integration /connector

Click on your newly created connector, specify your caller ID, and enter the one of your purchased phone numbers. (I had to copy-paste it for now from **Purchased Numbers** menu.)

The screenshot shows the SignalWire dashboard with the sidebar on the left. The main content area is titled 'Edit FreeSwitch Connection'. It features three input fields: '\* NAME' with the value 'tr2' and placeholder text 'Give this connection a friendly name to more easily find and search for it later.'; '\* CALLER ID' with the value 'Access News by Society For The Blind' and placeholder text 'Optional. Set a caller ID for outgoing SIP to SIP calls.'; and '\* SEND AS' with the value '+1 (916) 251-0217 (+19162510217)' and a dropdown arrow, with placeholder text 'When dialing a PSTN phone number, you must set the Caller ID as a number you have purchased or verified. This is not used when dialing SIP to SIP. If left blank, a random number you have purchased or verified will be used.'. A blue 'Save' button is positioned below the fields. At the bottom, there is a 'Delete Connection' section with the text 'Removing this connection will cause it to become unavailable immediately and it will no longer be able to send or receive audio or video.' and a red 'Delete Connection' button.

### Step 4. INCOMING CALLS: associate a connector with a purchased number to handle incoming calls

Click **Edit** on the purchased phone number,

SignalWire

Access News

PROJECT

- Dashboard
- Phone Numbers
- Relay
- SIP
- LtML
- Dialogflow
- Integrations
- API
- Usage

SPACE

- Users
- Billing
- Settings

## Purchased Numbers

Search Search + New

Purchased Verified Port Requests Number Groups E911

Name	Number	Capabilities
+1 (916) 251-0217 <small>01b0d413-f033b-4e6d3-a89b-134de8d5e343</small>	+1 (916) 251-0217	

Edit

and, depending on your use case, choose "Voice Calls" or "Fax" at "HANDLE INCOMING CALLS AS", select "a FreeSwitch Connector" at "HANDLE CALLS USING", and finally, select the connector that you desire.

SignalWire

Access News

PROJECT

- Dashboard
- Phone Numbers
- Relay
- SIP
- LtML
- Dialogflow
- Integrations
- API
- Usage

SPACE

- Users
- Billing
- Settings

## Edit +1 (916) 251-0217

Number Details

\* NAME

+1 (916) 251-0217

Add a friendly name for this number to help remember what it is used for.

Voice and Fax Settings

\* ACCEPT INCOMING CALLS AS

Voice Calls

\* HANDLE CALLS USING

a FreeSwitch Connector

\* WHEN A CALL COMES IN, FORWARD CALL TO:

tr2

Send incoming calls to this connection.

Messaging Settings

#### 4. Dialplan sample

##### **/etc/freeswitch/dialplan/default.xml (for example)**

```
<extension name="SignalWire INTEGRATIONS incoming call">
  <condition field="destination_number" expression="^\(+18005551212)$"> <!-- the number you assigned in
your dashboard -->
    <action application="bridge" data="user/1000"/>
  </condition>
</extension>

<extension name="signalwire INTEGRATIONS outgoing call">
  <condition field="destination_number" expression="^\(+?\d{11})$">
    <action application="answer"/>
  </condition>
</extension>
```

```
<action application="bridge" data="sofia/gateway/signalwire/$1"/>
</condition>
</extension>
```

## 5. Location of mod\_signalwire configuration

mod\_signalwire configuration settings are saved in memory of the FreeSWITCH instance, but they are also cached in the storage directory, in case it can't connect to SignalWire CLOUD on restart.

To find the storage directory, use one of the following:

### Linux terminal

```
$ fs_cli -x 'eval ${db_dir}'
```

### fs\_cli

```
freeswitch@vm> eval ${db_dir}
```

For vanilla installations, the location is `/var/lib/freeswitch/db/sofia_reg_signalwire.db`

## Manage Connectors/Integrations



### Outdated images

The images still have Connectors on them, but the principles are the same.

## Settings & Caller ID

Once the setup is complete, you can now enter the outbound Caller ID for this Integration which DID / Phone Number you would like to send calls as.

SignalWire

PROJECTS

- AI Voice - Butler
- EriksIVR
- Sawyer Demo
- Voice Application - Acme 1
- + New Project

APPLICATION

- Phone Numbers
- SIP
- LaML
- Dialogflow
- API
- Usage

SPACE

- Users
- Billing

### Edit Connection

\* NAME  
Eriks FS Windows  
Give this connection a friendly name to more easily find and search for it later.

\* CALLER ID  
Eriks FS  
Optional. Set a caller ID for outgoing SIP to SIP calls.

\* SEND AS  
+1 (604) 259-3270 (+16042593270)  
When dialing a PSTN phone number, you must set the Caller ID as a number you have purchased or verified. This is not used when dialing SIP to SIP. If left blank, a random number you have purchased or verified will be used.

Save

Delete Connection  
Removing this connection will cause it to become unavailable immediately and it will no longer be able to send or receive audio or video.

Delete Connection

## Associating Phone Numbers with Integrations

- Select Phone Numbers from the left navigation bar
- Then select the Number you wish to associate with your Integration.

- Select Integration, and the Integration type you wish to associate with your SignalWire service.

The screenshot shows the SignalWire web interface. On the left is a dark sidebar with navigation options: PROJECTS (AI Voice - Butler, ErikIVR, Sawyer Demo, Voice Application - Acme 1, + New Project), APPLICATION (Phone Numbers, SIP, LaML, Dialogflow, API, Usage), SPACE (Users, Billing). The main content area shows a project for phone number +1 (604) 259-3270, created 3 months ago. It includes sections for Project Details (with a name field containing the number), Voice and Fax Settings (with a dropdown for 'ACCEPT INCOMING CALLS AS' showing options like Voice Calls, LaML Webhooks, LaML Application, Dialogflow Agent, SIP Endpoint, and Connector), and call handling settings (with dropdowns for 'HANDLE CALLS USING' and 'FORWARD CALL TO:').

## Pricing and Fees

SignalWire Cloud fees are based on what our customers consume. There is no cost associated with the mod\_signalwire module itself.

<https://signalwire.com/disruptive-pricing>

## Support

API Documentation

<https://docs.signalwire.com/relay-rest>

Slack Community

<https://slack.signalwire.community>

instructions for setting up mod\_signalwire on FreeSWITCH and creating a CLOUD Integration (private)

[https://freeswitch.org/confluence/display/FREESWITCH/mod\\_signalwire](https://freeswitch.org/confluence/display/FREESWITCH/mod_signalwire)

Wiki (private)

[https://github.com/signalwire/mod\\_gcloud/wiki](https://github.com/signalwire/mod_gcloud/wiki)